

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Gary Jacobs (Reg. No. 28,861) on February 9, 2009.

2. The application has been amended as follows:

20. (Currently Amended) A printing system in which an image sensing apparatus and a printing apparatus directly communicate with each other, and said printing apparatus prints an image transmitted from the image sensing apparatus, wherein said image sensing apparatus comprises:

a first reception unit configured to receive function information of the printing apparatus from the printing apparatus, wherein the function information describes the kind of feature amount data which the printing apparatus can use in correction processing for an image to be printed;

an extraction unit configured to analyze image data of an image file to be printed and extract from the image data a feature amount corresponding to the kind of feature amount data described in the function information received by said first reception unit;

a generation unit configured to generate a data file which is a file independent from the image file and describes the feature amount extracted by said extraction unit,

where the kind of the feature amount is determined in accordance with the function information received by said first reception unit; and

a first transmission unit configured to transmit files of the data file generated by said generation unit and the image file to said printing apparatus;

said printing apparatus comprises:

a second transmission unit configured to transmit the function information of said printing apparatus from said printing apparatus to said image sensing apparatus;

a second reception unit configured to receive the files of the data file and the image file transmitted by said first transmission unit;

a correction unit configured to correct the image data of the image file received by said first reception unit on the basis of the received data file; and

a printing unit configured to print ~~an~~ the image in accordance with the image data corrected by said correction unit,

wherein the data file is transmitted from said image sensing apparatus to said printing apparatus before the image file is transmitted from said image sensing apparatus to said printing apparatus.

26. (Currently Amended) The image sensing apparatus according to claim 25, further comprising a designation unit configured to designate ~~an~~ the image to be transmitted to said printing apparatus,

wherein said transmission unit transmits the data file to said printing apparatus before the image designated by said designation unit is transmitted to said printing apparatus.

35. (Currently Amended) A method of controlling an image sensing apparatus and a printing apparatus which directly communicate with each other, and said printing apparatus prints an image transmitted from the image sensing apparatus, comprising:

a first reception step of receiving, by the image sensing apparatus, function information of the printing apparatus from the printing apparatus, wherein the function information describes the kind of feature amount data which the printing apparatus can use in correction processing for an image to be printed;

an extraction step of analyzing image data of an image file to be printed and extracting from the image data a feature amount corresponding to the kind of feature amount data described in the function information received by said first reception step;

a generation step of generating a data file which is a file independent from the image file and describes the feature amount extracted by said extraction step, where the kind of the feature amount is determined in accordance with the function information received by said first reception step; and

a first transmission step of transmitting files of the data file generated by said generation step and the image file to said printing apparatus;

a second transmission step of transmitting the function information of said printing apparatus from said printing apparatus to said image sensing apparatus;

a second reception step of receiving the files of the data file and the image file transmitted by said first transmission step;

a correction step of correcting the image data of the image file received by said first reception step on the basis of the received data file; and

a printing step of printing ~~an~~ the image in accordance with the image data corrected by said correction step,

wherein the data file is transmitted from said image sensing apparatus to said printing apparatus before the image file is transmitted from said image sensing apparatus to said printing apparatus.

37. (Currently Amended) The method according to claim 35, wherein said image sensing apparatus further comprises a designation step of designating ~~an~~ the image to be transmitted to said printing apparatus,

wherein said extraction unit extracts the feature amount from the image designated by said designation unit.

39. (Currently Amended) The method according to claim 35, wherein the correction step determines a parameter in accordance with the data file and corrects the received image data using the determined parameter.

40. (Currently Amended) A method whereby an image sensing apparatus communicates with a printing apparatus, comprising:

a reception step of receiving, by the image sensing apparatus, function information of the printing apparatus from the printing apparatus, wherein the function information describes the kind of feature amount data which the printing apparatus can use in correction processing for an image to be printed;

an extraction step of analyzing image data of an image file to be printed and extracting from the image data a feature amount corresponding to the kind of feature amount data described in the function information received by said reception step;

a generation step of generating a data file which is a file independent from the image file and describes the feature amount extracted by said extraction step, where the kind of the feature amount is determined in accordance with function information received by said reception step; and

a transmission step of transmitting files of the data file and the image file to said printing apparatus,

wherein the data file is transmitted from said image sensing apparatus to said printing apparatus before the image file is transmitted from said image sensing apparatus to said printing apparatus.

41. (Currently Amended) The ~~image-sensing~~ method according to claim 40, further comprising a designation step of designating ~~an~~ the image to be transmitted to said printing apparatus,

wherein said transmission step transmits the data file to said printing apparatus before the image designated by said designation step is transmitted to said printing apparatus.

43. (Currently Amended) The ~~image-sensing~~ method according to claim 40, further comprising a designation step of designating ~~an~~ the image to be transmitted to said printing apparatus,

wherein said extraction step extracts the feature amount from the image designated by said designation step.

50. (Currently Amended) A computer-readable medium encoded with a computer program communicating with a printing apparatus, for implementing a method, comprising:

a reception step of receiving, by an image sensing apparatus, function information of the printing apparatus from the printing apparatus, wherein the function information describes the kind of feature amount data which the printing apparatus can use in correction processing for an image to be printed;

an extraction step of analyzing image data of an image file to be printed and extract from the image data a feature amount corresponding to the kind of feature amount data described in the function information received by said reception step;

a generation step of generating a data file which is a file independent from the image file and describes the feature amount extracted by said extraction step, where the kind of the feature amount is determined in accordance with the function information received by said reception step; and

a transmission step of transmitting files of the data file and the image file to said printing apparatus,

wherein the data file is transmitted from said image sensing apparatus to said printing apparatus before the image file is transmitted from said image sensing apparatus to said printing apparatus.

52. (Currently Amended) The printing system according to claim 20, wherein said printing apparatus further comprises:

a second extraction unit configured to analyze the image data of the image file received by said second reception unit and extract a second feature amount of the image data; and

a second correcting unit configured to correct the image data of the image file received by said second reception unit using at least one of the feature amount described in the data file received from said image sensing apparatus by said second reception unit and the second feature amount extracted by said second extraction unit.

54. (Currently Amended) The printing system according to claim 53, wherein said image sensing apparatus further comprises a job transmission unit configured to transmit a print job designating ~~an~~ the image to be printed to said printing apparatus,

wherein the print job describes information of ~~an~~ the image file to be printed and information related to the feature amount stored as the data file in the storage medium.

55. (Currently Amended) The printing system according to claim 54, wherein the print job describes information for specifying ~~an~~ the image file to be printed and information for specifying the data file.

56. (Currently Amended) A The method according to claim 35, further comprising:

a second extraction step of analyzing the image data of the image file received by said second reception step and extracting a second feature amount of the image data; and

a second correcting step of correcting the image data of the image file received by said second reception step using at least one of the feature amount described in the

data file received by said second reception step and the second feature amount extracted by said second extraction step.

57. (Currently Amended) A The method according to claim 35, further comprising a recording step of recording, as the data file, information related to the feature amount extracted by said extraction step into a storage medium which is used for storing image files.

58. (Currently Amended) A The method according to claim 35, further comprising a job transmission step of transmitting a print job designating ~~an~~ the image to be printed to said printing apparatus,

wherein the print job describes information of ~~an~~ the image file to be printed and information related to the feature amount stored as ~~a~~ the data file in the storage medium.

59. (Currently Amended) A The method according to claim 35, wherein the print job describes information for specifying ~~an~~ the image file to be printed and information for specifying the data file.

60. (Currently Amended) A The image sensing apparatus according to claim 25, wherein said image sensing apparatus further comprises a recording unit configured to record, as the data file, information related to the feature amount extracted by said extraction unit into a storage medium which is used for storing image files.

61. (Currently Amended) A ~~An~~ The image sensing apparatus according to claim 60, wherein said image sensing apparatus further comprises a job transmission unit

configured to transmit a print job designating ~~an~~ the image to be printed to said printing apparatus,

wherein the print job describes information of ~~an~~ the image file to be printed and information related to the feature amount stored as a data file in the storage medium.

62. (Currently Amended) ~~The printing system image sensing apparatus~~ according to claim 61, wherein the print job describes information for specifying ~~an~~ the image file to be printed and information for specifying the data file.

63. (Currently Amended) ~~A~~ The method according to claim 40, further comprises a recording step of recording, as the data file, information related to the feature amount extracted by said extraction step into a storage medium which is used for storing image files.

64. (Currently Amended) ~~A~~ The method according to claim 63, further comprising a job transmission step of transmitting a print job designating ~~an~~ the image to be printed to said printing apparatus,

wherein the print job describes information of ~~an~~ the image file to be printed and information related to the feature amount stored as a the data file in the storage medium.

65. (Currently Amended) ~~A~~ The method according to claim 64, wherein the print job describes information for specifying ~~an~~ the image file to be printed and information for specifying the data file.

66. (Currently Amended) ~~A~~ The computer-readable medium according to claim 50, the implemented method further comprises a recording step of recording, as the

data file, information related to the feature amount extracted by said extraction step into a storage medium which is used for storing image files.

67. (Currently Amended) A The computer-readable medium according to claim 66, wherein said implemented method further comprising a job transmission step transmitting a print job designating ~~an~~ the image to be printed to said printing apparatus, wherein the print job describes information of ~~an~~ the image file to be printed and information related to the feature amount stored as a the data file in the storage medium.

68. (Currently Amended) A The computer-readable medium according to claim 67, wherein the print job describes information for specifying ~~an~~ the image file to be printed and information for specifying the data file.

69. (Currently Amended) The printing system according to claim 20, wherein the function information describes a kind of histogram data which the printing apparatus can use in the correction processing for ~~an~~ the image to be printed, wherein the extraction unit extract from the image data of the image file to be printed the histogram data corresponding to the kind of histogram data described in the function information received from the printing apparatus, and wherein the generation unit generates an feature amount data file describing the extracted histogram data.

70. (Currently Amended) The image sensing apparatus according to claim 25, wherein the function information describes a kind of histogram data which the printing apparatus can use in the correction processing for ~~an~~ the image to be printed,

wherein the extraction unit extracts from the image data of the image file to be printed the histogram data corresponding to the kind of histogram data described in the function information received from the printing apparatus, and

wherein the generation unit generates a feature amount data file describing the extracted histogram data.

71. (Currently Amended) The method according to claim 35,

wherein the function information describes a kind of histogram data which the printing apparatus can use in the correction processing for ~~an~~ the image to be printed,

wherein the extraction step extracts from the image data of the image file to be printed the histogram data corresponding to the kind of histogram data described in the function information received from the printing apparatus, and

wherein the generation step generates a feature amount data file describing the extracted histogram data.

72. (Currently Amended) The method according to claim 40,

wherein the function information describes a kind of histogram data which the printing apparatus can use in the correction processing for ~~an~~ the image to be printed,

wherein the extraction step extracts from the image data of the image file to be printed the histogram data corresponding to the kind of histogram data described in the function information received from the printing apparatus, and

wherein the generation step generates a feature amount data file describing the extracted histogram data.

73. (Currently Amended) The computer-readable medium according to claim 50,

wherein the function information describes a kind of histogram data which the printing apparatus can use in the correction processing for ~~an~~ the image to be printed,

wherein the extraction step extracts from the image data of the image file to be printed the histogram data corresponding to the kind of histogram data described in the function information received from the printing apparatus, and

wherein the generation step generates an feature amount data file describing the extracted histogram data.

ALLOWANCE

Allowable Subject Matter

3. **Claims 20, 22-26, 28, 29, 35, 37-41, 43, 44, 50, 52-73** are allowed. These claims will be renumbered as 1-39.

4. The following is an examiner's statement of reasons for allowance:

The prior art of record do not teach or suggest the claimed limitation of an image sensing apparatus for 1) receiving function information of the printing apparatus from the printing apparatus, wherein the function information describes the kind of feature amount data which the printing apparatus can use in correction processing for an image to be printed, 2) analyzing image data of an image file to be printed and extracting from the image data a feature amount corresponding to the kind of feature amount data described in the function information received, and 3) generating a data file which is a file independent from the image file and describing the feature amount extracted, where the kind of the feature amount is determined in accordance with the function information

received, wherein the data file is transmitted from said image sensing apparatus to said printing apparatus before the image file is transmitted from said image sensing apparatus to said printing apparatus.

The features identified, in combination with other claim limitations, are neither suggested nor discussed by the prior art of record.

The most relevant prior art Tanaka (US 2001/0048534) discloses an image sensing apparatus (digital camera) for generating data file, which is independent of an image file, describing data for image correction. However, it does not disclose an image sensing apparatus including a receiving unit for receiving function information describing the kind of feature amount data which the printing apparatus can use in correction processing for an image to be printed.

Many prior art references teach the concept of analyzing, by the image sensing apparatus, a sensed image and extracting a feature amount from the sensed image for generating the data file describing the feature amount extracted (refer to paragraphs 130~134 of Ichikawa (US 2004/0201727)). However, Ichikawa does not teach the step of generating a data file which is a file independent from the image file and describing the feature amount extracted, where the kind of the feature amount is determined in accordance with the function information received.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S. PARK whose telephone number is (571)272-7409. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHAN S PARK/
Examiner, Art Unit 2625

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